

Some 19th Century Recollections of New York and Its Botanical Activities

ROLAND M. HARPER

In the fall of 1899 I went to New York to begin graduate work in botany at Columbia University. For two years immediately preceding I had lived in Massachusetts, and for ten years before that in Georgia, where I began the study of botany in the spring of 1895.

Up to 1899 my formal training in botany had been limited to an elementary course of about four months at the University of Georgia, given by a professor of "biology" who was primarily a zoologist, as in many small colleges at that time;¹ and it was chiefly devoted to the identification of flowering plants.

As far as I knew then, the main object of botanical investigation was floristic, discovering and describing as many species of plants as possible, and outlining their distribution, as the writers of manuals had done.² In Georgia I had used Gray's "School and Field Botany," Wood's "Botanist and Florist," and Chapman's "Flora of the Southern United States" (second edition) for plant identifications, and in Massachusetts I became acquainted with Gray's "Manual" (sixth edition). The first volume of Britton & Brown's epoch-making "Illustrated Flora" appeared in 1896, while I was still in Georgia, and I saw it there, but did not have much occasion, or opportunity, to use it until I came to New York.

While in Massachusetts I had gotten hold of a few odd numbers of the *Asa Gray Bulletin*, *Fern Bulletin*, and *Torrey Bulletin*, and had seen every issue of *Rhodora*, which began in January, 1899. I had also visited Cambridge

¹ It happens that this same man a few years before had written for the U. S. Bureau of Education a circular on biological teaching in the United States, which instigated a spirited discussion of the subject by Conway MacMillan and others, than ran through at least a dozen issues of *Science*, between April 7 and December 22, 1893, and covered nearly 14 large quarto pages. In the second series of the same magazine, over half a century later, between January 28 and June 9, 1944—nearly six pages in all—the same subject was thrashed out again, with very similar arguments, by five men who had apparently completely overlooked the controversy of 1893, though one of them did refer to an article on the subject published in 1919.

² For a discussion of the difference between flora and vegetation see TORREYA 17: 1-3. January, 1917.

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two or three times, and met Dr. B. L. Robinson, M. L. Fernald, and Dr. J. M. Greenman.

In the *Torrey Bulletin* I had been especially thrilled by Dr. John K. Small's articles on plants of the southeastern states, some of which I already knew. I had brought with me to New York for identification some of the plants I had collected in 1895-97, one of which turned out to be undescribed, and was named within a year (*Scirpus georgianus*).

At the time of my arrival in New York both undergraduate and graduate work in botany were carried on in Schermerhorn Hall, which looked about the same as today, externally at least, though it was not then so closely crowded by other buildings. Prof. L. M. Underwood was head of the department, and two graduate students, Howard J. Banker and David Griffiths, were working on fungi in an office next to his. Two other graduate students, Tracy E. Hazen and J. E. Kirkwood, were somewhere around the place, but I saw them less often.

The main building of the New York Botanical Garden was not quite completed, but the herbarium and exhibits were being moved into it, and it was opened to the public the following March. Dr. N. L. Britton, the director, Dr. Small and Mr. George V. Nash, head gardener, had already established homes near there, and they and Dr. P. A. Rydberg and a few others were on the grounds much of the time, getting things in order.

Dr. M. A. Howe, then curator of the Columbia herbarium, took me out to the Garden for my first visit on October 2. When we called on Dr. Britton, we found him and Mr. Nash making a list of plants in the Garden that had been killed by a freeze the night before. Somewhere in the wooded part of the grounds, in or near the hemlock grove, Dr. Howe showed me how the ripe fruits of *Polygonum virginianum* jump several feet from the plant when loosened by a touch; something I had never seen before.³ (That distinguishes it sharply from typical *Polygonum*, and amply justifies its treatment by Small as a distinct genus.) The director's office was then temporarily in a two-story wooden building, a former residence, on the other side of the railroad, and plants were being mounted there. I believe it was there that I met Willard N. Clute and Percy Wilson not long afterward.

On account of my limited botanical training Prof. Underwood advised me to take an undergraduate laboratory course in elementary botany, under Dr. C. C. Curtis, who was then tutor in botany at Columbia, and had written a text-book on the subject, which we used. So I spent a few hours a week in his laboratory. There I learned something about microscopes, plant anatomy, etc., but the course did not interest me much. The text-books of those days

³ Apparently the first satisfactory explanation of this phenomenon is that by Reed and Smoot in the *Torrey Bulletin* for July, 1906. There is also a short note on the subject by George T. Hasting in *Torrey* for December, 1932 (p. 169).

told nothing about ecology, mutation, or Mendelism, and if chromosomes were mentioned their significance was not known. Among Dr. Curtis's students at that time were Percy Wilson, previously mentioned, and two young men who were primarily zoologists, and afterward attained some distinction in that field, namely, R. A. Budington and G. G. Scott.

At first I thought I would take a minor in zoology, as many botanists did, but after attending one or two lectures, by Prof. E. B. Wilson, in that department on the floor above, I decided that that was not what I wanted, and I switched to paleobotany. The instructor in that was Dr. Arthur Hollick, on the first floor; and I was his only student at that time. I also had a minor in mathematics, under C. J. Keyser, in one of the old buildings, long since replaced by a modern one; and I stuck to that for two years, but did not get much out of it that I could use afterward.

One of my greatest privileges in those days was the use of the botanical library, then in Schermerhorn Hall, adjoining Prof. Underwood's office. It was not large enough then to require the services of a librarian, and Prof. Underwood looked after it, perhaps with some clerical assistance. He was a very active man, and among his other duties he was editing the *Torrey Bulletin*. The following year most of the library was moved to the Garden and combined with the Garden library, where Miss Anna Murray Vail had charge of the combined collection for several years. There the library grew rapidly.

I had never seen a botanical library before I went to New York, except perhaps for a glimpse at that of the Gray Herbarium, and I soon spent many hours in it, reading back numbers of magazines, and some of the books. In the magazines I found several New England local floras that Miss Mary A. Day had overlooked in her list just published in several numbers of *Rhodora*, and after I wrote her about them she included them in a supplementary list.

As my main interest then was in Georgia plants, I did not pay much attention to the local flora. But I soon became acquainted with a few halophytic plants—among them *Fucus vesiculosus*, a common brown alga—which were new to me because I had never lived near the coast before, and I also learned some weeds more characteristic of large cities than of small towns. A short trip by ferry from the foot of West 125th St., which I made with Prof. Underwood a few days after my arrival, took one to Fort Lee, N. J., where there were some interesting rocky woods along the Palisades.

On visits to friends at Jamaica, Long Island, I saw something of the woods near there, which I studied more intensively about 16 years later. The Hempstead Plains, a little farther out on the island, were then practically unknown to botanists, even to some who had crossed them by train on the way to Cold Spring Harbor; and I did not discover them until 1907.

Near the north end of Manhattan Island, then reached principally by trolley car, there were considerable areas of practically virgin forest, and I

remember seeing *Bicuculla Cucullaria* there for the first time, in the spring of 1900. Another novelty to me was *Claytonia virginica*, typically an inhabitant of rich woods, but there found also along the streets, in rich soils. At Riverdale, a little farther north, in the Bronx, were other wooded areas with streets winding through them. In that charming residential community lived E. P. Bicknell, an enthusiastic amateur botanist who worked in a business house downtown, and had astonished the local botanists a few years before by discovering previously unrecognized species of *Sisyrinchium*, *Asarum*, *Sanicula*, *Scrophularia*, and perhaps other genera, practically in his back yard.

About two weeks after arriving in New York I wrote some of my impressions of the city and its botanical activities in a long letter to my life-long friend Clarence H. Knowlton, an amateur botanist of Boston. About 43 years later he came across that letter again and returned it to me, thinking I might like to keep it. And the following quotations from it may be of present interest:

"Monday, Oct. 2nd, I found my way up to the college grounds. . . . I soon met Prof. Underwood, and had a little talk with him, and he introduced me to the other botanists who happened to be around, such as Dr. Curtis, Dr. Howe, Dr. Small, Dr. Rydberg, and two graduate students, Mr. Griffiths, of South Dakota, and Mr. Banker, of this state. Dr. Curtis is tutor in botany. . . . Dr. Howe, who got his Ph.D. last year, is now curator of the herbarium [of Columbia University]. . . . Dr. Small, his predecessor, is curator of the N. Y. Botanical Garden herbarium, which amounts to practically the same thing. . . .

"Monday afternoon I went out to the Garden, which is at Bronx Park, with Dr. Howe. I met out there Mrs. Britton, Dr. Britton, and Mr. Nash, the agrostologist. . . . The botanical garden covers about 250 acres, but most of it is woods, and very nice and primeval-looking woods, too. Much of it is dark rocky hemlock woods, . . . [On my last visit, in the summer of 1940, I found the hemlock forest considerably the worse for wear, so to speak.]

"They are building a big museum and greenhouses out there. I will have to go there for my graduate work in botany when the museum is finished, which will be about next month. Most of the herbarium has been moved from here [Columbia University] into the museum building already.

"Last Tuesday night, Oct. 10th, I attended the first fall meeting of the Torrey Botanical Club, which was held in the library of the College of Pharmacy, on 68th St. There was a great contrast, both in members and surroundings, between this meeting and that of the New England Botanical Club which I attended in June, . . .

"The Torrey Club met in a room with bare floor and low ceiling, and not very well lighted. No liveried attendants were there to respond to a press of the button, or take care of hats and coats, and no refreshments were served. But of course the character of the meeting depends less on the surroundings

than on the members. There just occurs to me one particular in which the Torrey Club has the advantage of the New England. The members do not smoke during the meetings. [Perhaps on account of the presence of ladies, who were—and I believe still are—barred from membership in the New England Botanical Club. There were one or two, possibly more, tobacco addicts at this meeting, but in those days no gentleman would have ventured to smoke in the presence of ladies.]

“Dr. Rusby, one of the vice presidents, presided, and Prof. Burgess (who gets about a dozen species out of *Aster macrophyllus*) was (and is) secretary. Judge Brown, the president [was absent]. . . . There were about 32 persons at the meeting, about 11 of whom were women. . . . Mrs. Britton (who by the way is the first female botanist I ever saw) was the only woman there that I knew.

“Among the men present were Dr. Britton (of course), Prof. Underwood, Dr. Small, Dr. Howe, Dr. MacDougal, Prof. Porter, the veteran botanist of Pennsylvania, Mr. A. A. Heller, the explorer of Hawaii, North Carolina, Porto Rico, Texas, etc., Prof. [Francis E.] Lloyd, Mr. Cornelius Van Brunt, an old gentleman whose name suggests his descent from the early Dutch settlers, Mr. Hazen, the present Fellow in Botany, Mr. Griffiths, Mr. Banker, and several others whom I did not know. Prof. Porter and myself were the only members of the N. E. Bot. Club present, as far as I know.

“ . . . This meeting was mostly devoted to reports of the excursions of the club since its last meeting in May. They get up excursions to various points within 50 miles or so about every week in the season. From these reports I learned of a lot of interesting plants that grow around here.

“Strange to say, the members do not seem to be at all familiar with the Britton & Brown nomenclature. . . .

“These meetings do not seem to be attended with as much interest and importance as those of the N. E. Bot. Club, but this is probably due to their greater frequency (twice a month for eight months in the year). . . . They sometimes elect from ten to twenty new members at one meeting.”⁴

Besides the botanists already mentioned, I have pleasant recollections of the following met during my first year in New York, at the Garden, Columbia University, the Torrey Club meetings, or elsewhere:—Dr. T. F. Allen, Rev. L. T. Chamberlain, Rev. L. H. Lighthipe, Dr. H. M. Richards, Dr. J. N. Rose of the National Herbarium, and Mr. R. S. Williams.⁵ Others equally

⁴ For an official account of this meeting see Bull. Torrey Bot. Club, 26: 639-641. December, 1899.

⁵ It may be worth noting here that although the beard fashion had declined from its mid-19th century peak, about half the men mentioned in this article wore beards, and about half the remainder had mustaches.

Only a few of them are now living. Sketches of many of them can be found in “Who Was Who” Of 25 persons mentioned in this paper (not all of them botanists, though, nor

important appeared on the scene in the next year or two, but this narrative will be confined to the 19th century. There was probably no other place in the western hemisphere, with the possible exception of Boston and Washington, where so many botanists were concentrated, and knowing them was a wonderful opportunity for a beginner like myself. That was a time of great botanical activity, which bore abundant fruit in the next few years.

The American botanical journals of those days, as I recall them, were the *Torrey Bulletin*, founded in 1870 (while Dr. Torrey was still living); the *Botanical Gazette*, started as the *Botanical Bulletin* by the Coulter brothers a few years later; the *Fern Bulletin*, published by Willard N. Clute; the *Asa Gray Bulletin*, which had a brief existence in the 90's, and was superseded or absorbed by the *Plant World*, which in turn changed its form and management two or three times, and was succeeded by *Ecology*; the *Bulletin of the New York Botanical Garden*, an official publication or "house organ," started in 1895; *Rhodora*, the journal of the New England Botanical Club, started in 1899; and the *Journal of the New York Botanical Garden*, started in 1900. There were also two or three in the far West, and a few personal organs, besides some annual publications like that of the Missouri Botanical Garden, some appearing at irregular intervals, like the *Contributions from the U. S. National Herbarium*, and several magazines and scientific society proceedings that published important botanical papers but were not confined to botany.

It may be appropriate to record here an almost forgotten bit of local botanical history. At a meeting of the Torrey Club, it must have been some time in 1900, Prof. Underwood observed that the name "Bulletin of the Torrey Botanical Club" was too long and unwieldy, and suggested that it be changed to "Torreya." Although he was popular and influential, and was then editor of the *Bulletin*, his suggestion was received without enthusiasm, and I have found no mention of it in the published proceedings of the Club. But it evidently bore fruit, for at the beginning of 1901 the new magazine *Torreya* was launched, intended to carry articles shorter and more popular and of more local interest than the more technical ones in the *Bulletin*, which had a world-wide circulation. In fact it was much like the *Bulletin* had been in its first decade or two. It served its purpose well, and for twenty years it received enough manuscripts to publish an issue every month. Then it changed to a bi-monthly.

When I went to New York my first plan for research was simply to write a flora of Georgia, which was then a comparatively unworked field. But in the magazines I saw at Columbia I found the emerging science of ecology represented by a few articles in which the plants of various regions were all New Yorkers) whose dates of birth and death are known, the average longevity was 71.5 years, which seems to be about the average for scientists in general. But nine who are still living average 76 years old at this time.

classified by habitat, which was a new idea to me, and appealed to me. During my first year there I wrote two articles on Georgia, classifying by habitat the plants around Athens, where I attended college from 1894 to 1897, and those around Americus, where I lived from 1892 to 1897, depending mostly on memory, for I took few notes in those days. These were published in the *Torrey Bulletin* for June and August, 1900. None of my preceptors at that time were interested in that sort of work, and they might have recommended other lines of research, but they did not try to discourage me. And that has continued to be my principal botanical interest ever since.

Summer schools were rare or unknown in those days, and I planned to spend the summer of 1900 in exploring as much as possible of Georgia, hoping to collect enough plants to pay the expenses of the trip, which I did. From members of the Columbia and Garden staffs I got the addresses of several herbaria in the United States and Europe that might like to buy my specimens, and I wrote to them beforehand, and soon got enough orders to justify the trip.⁶ At the suggestion of Dr. Britton, Judge Brown lent me enough money to pay my traveling expenses,⁷ which were kept rather low by the hospitality of several friends in Georgia whom I visited. For about four weeks that summer Percy Wilson of the Garden staff was with me, and it was an interesting experience for him, as he had never been so far from home before. (But the following year he went half way around the world with an astronomical expedition, and later he made many trips to tropical America.) The Georgia expedition, rounding out my first year at Columbia, yielded some interesting results in the way of new species and extensions of range. My report on it was published in the *Torrey Bulletin* for August, 1901, but nothing more need be said about it here, for that would be getting too far from New York, and carrying us beyond the 19th century with which this account has dealt.

UNIVERSITY, ALABAMA

⁶ Incidentally, most of the letters received from Europe were written with pen and ink, presumably indicating that typewriters—an American invention of about two decades before—were less common there than here.

⁷ But did not donate it as one might infer from Dr. Britton's report in *Bull. N. Y. Bot. Gard.* 2: 23. 1901.
